REMARKS/ARGUMENTS

Status of the Claims

Claims 1-44 are pending in the application. Claims 8-44 have been withdrawn from consideration due to a previous Election of Species Requirement. Claims 1 and 2 have been amended. Support for the claim amendments can be found from page 33, line 15 through page 36, line 2 of the original specification as filed.

Reconsideration of the application as amended is respectfully requested.

Overview of the Office Action

The title of the invention has been objected to for being not descriptive.

Claims 1-7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over US Pub. 2001/0055073 to *Shinomiya* in view of USP 5,783,815 to *Ikeda*.

Amendments Addressing Formality Issues

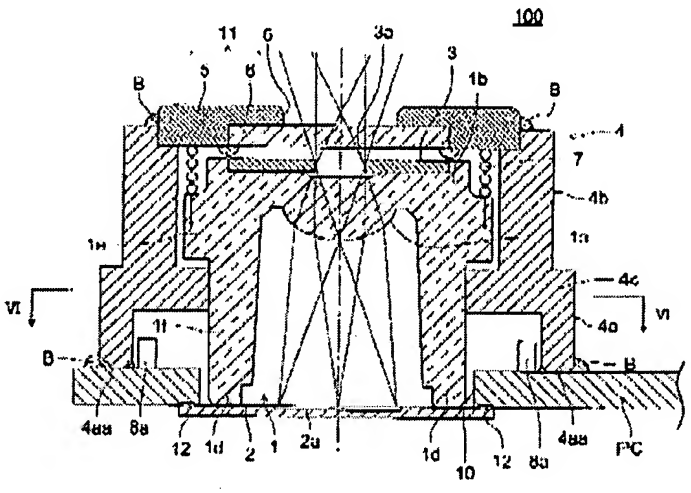
The title of the invention has been amended to read as: "Image Pickup Device Having A Single-Piece Optical Member and Portable Terminal Equipped Therewith." The objection to the specification is thus believed to have been overcome.

Summary of Subject Matter Disclosed in the Specification

The following descriptive details are based on the specification. They are provided only for the convenience of the Examiner as part of the discussion presented herein, and are not intended to argue limitations which are unclaimed.

The present specification discloses an image pickup device (100) formed on a base board PC, in which opening portion (10) is formed. An image pickup element (2) is provided to cover the opening portion (10) from the rear side of the base board PC. An optical member (1) is provided for converging on image pickup element (2) through the opening portion (10) from the surface side of the base board PC by touching a light-intercepting surface representing the

surface of the image pickup element (2). The image pickup device (100) also comprises a lens frame (4) representing an outer frame member that covers the image pickup element (2) and the opening portion (10). (*See*, *e.g.*, pg. 31, ln. 2 to pg. 32, ln. 10 of the specification as filed and Fig. 2 reproduced below for the Examiner's convenient reference.)



The optical member (1) includes a lens portion (1a) to form an image of an object onto the optical pickup element (2), a leg portion (1c) to support the lens portion (1a) and a contact portion (1d) to be brought in contact with the image pickup element (2). (*See*, *e.g.*, pg. 33, ln. 15 through pg. 36, ln. 2 of the specification as filed.)

Allowability of the Claims

Independent Claim 1 is Not Obvious Over the Cited Art

Independent claim 1 recites an optical member "including a lens portion to form an image of an object onto the optical pickup element, a leg portion to support the lens portion, and a contact portion to be brought in contact with the image pickup element" and "being provided so as to come in contact with a front surface of the image pickup element from the front surface of the base board through the opening portion."

According to present invention, the optical member and the image pickup element are directly in contact with each other. The positioning of the image pickup device in the optical

axis direction can be achieved by using only the image pickup element and the optical member. Additionally or alternatively, the entire length in the optical axis direction of the image pickup device can be shortened by the thickness of the base board when the optical member is brought into contact with the image pickup element (*see, e.g.*, page 8, lines 1-17 of the specification as filed), as compared with the structure where an image pickup element is arranged on a base board and an optical member is brought into contact with the base board.

Neither *Shinomiya* nor *Ikeda* teach the above features recited in independent claim 1.

Shinomiya discloses a solid state imaging apparatus, in which an imaging element 9 is mounted on the rear side of a flexible printed circuit board (FPC) 1, while an optical member (including the lens 6 and the frame 13) is mounted on the front side of the FPC board 1.

Due to insufficient mechanical strength of the FPC board 1, *Shinomiya* treaches reinforcing plates 2a, 2b provided to strengthen the FPC board 1, so that the positioning of a frame 13 to the FPC board 1 can be achieved using the reinforced FPC board 1. In other words, the positioning of the optical element to the imaging element 9 cannot be achieved, if the FPC board 1 does not have sufficient mechanical strength. Consequently, in *Shinomiya*, the positioning of the optical member to the imaging element 9 in an optical axis direction is achieved through several positioning operations between (i) the imaging element 9 and the FPC board 1, (ii) the FPC board 1 and the reinforcing plates 2a, 2b, (iii) the reinforcing plates 2a, 2b and the frame 13, and (iv) the frame 13 and the lens 6.

Accordingly, as the Office Action acknowledges, *Shinomiya* does not teach an optical member "being provided so as to come in contact with a front surface of the image pickup element from the front surface of the base board through the opening portion" as recited independent claim 1.

The Office Action takes the position that "Ikeda ... teaches the optical member being

provided so as to come in contact with a front surface of the image pickup element from the front surface of the base board through the opening portion" (*see*, page 3 of the Office Action, the second paragraph from the bottom). Applicants disagree.

Ikeda teaches that the image sensing element 3 and the printed circuit board 1 are brought into contact with each other. *Ikeda* however does not teach that its printed circuit board 1 has an opening portion, that the lens fitting member 5 comes in contact with the image sensing element 3 through an opening portion formed on the printed circuit board, or that the image pickup element is provided on a reverse surface of the base board. Rather, *Ikeda* merely teaches that legs 6 of the lens fitting member 5 are brought into contact with the surface of the image sensing element 3 which is arranged on a front surface of the printed circuit board 1 (*see*, col. 4, ll. 52-56 and Figs. 3A and 3B).

Accordingly, *Ikeda* does not teach an optical member "being provided so as to come in contact with a front surface of the image pickup element from the front surface of the base board through the opening portion" as recited independent claim 1. Therefore, *Ikeda* does not remedy the above deficiencies of *Shinomiya*.

In view of the above, independent claim 1 patentably distinguishes over the cited art. Withdrawal of the 35 U.S.C. § 103(a) rejection of independent claim 1 is hereby respectfully requested.

Dependent Claims 2-7

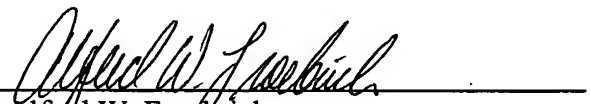
Claims 2-7 depend, either directly or indirectly, from one of independent claim 1 and therefore are each allowable for at least the same reasons that independent claim 1 is allowable. In addition, these dependent claims include features which serve to still further distinguish the claimed invention over the prior art of record.

Conclusion

Based on all of the above, applicants submit that the present application is now in full and proper condition for allowance. Prompt and favorable action to this effect, and early passage of the application to issue, are once more solicited. Should the Examiner have any comments, questions, suggestions or objections, she is requested to telephone the undersigned to facilitate an early resolution of any outstanding issues.

Respectfully submitted,

COHEN PONTANI LIEBERMAN & PAVANE LLP

By 

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